EDUCATION IN AGROFORESTRY: PRELIMINARY RESULTS FROM THE AGROF MM – ERASMUS + PROJECT

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Abstract

Agrof MM, "Training in Agroforestry - Mediterranean - Semi-Arid Zones – Mountain AGROF MM", is a 3-year KA-2 ERASMUS+ educational project that aims to i) train 130 to 150 agricultural professionals in Europe, ii) improve and develop the education tools which will allow agroforestry training to be long-lasting, and iii) develop a unique agroforestry qualification program in each European country. It is coordinated by AgroSup Dijon, France and involves thirteen partners from 10 different countries who contribute to the project with a wide range of knowledge, experiences and ideas to promote education in agroforestry, disseminate this land use and allow the acquisition of new competencies and knowledge for those involved in its practice. So far, it has analysed existing educational systems and further seeks to describe existing training procedures and identify needs, to census and evaluate existing educational tools, and to enrich the European book of professional reference for agroforestry farmers.

Keywords: knowledge transfer; training; farmers; educators

Introduction

Agroforestry is "the deliberate integration of woody vegetation (trees and/or shrubs) as an upper storey on land, with pasture (consumed by animals) or an agricultural crop in the lower storey. The woody species can be evenly or unevenly distributed or occur on the border of plots. The woody species can deliver forestry or agricultural products or other ecosystem services (i.e. provisioning, regulating or cultural)". Agroforestry is a traditional land use system that may be the answer to many present and future environmental problems. However, many farmers that practice agroforestry neither identify its name nor accept such identification. Education must become the "alpha" and "omega" in confronting this problem mainly in enhancing the uptake of agroforestry. In this article the ERASMUS+ AGROF MM project is presented as a contribution to the education in agroforestry.

The project

Agrof MM, "Training in Agroforestry - Mediterranean - Semi-Arid Zones – Mountain AGROF MM", is a 3-year KA-2 ERASMUS+ educational project that aims to i) train 130 to 150 agricultural professionals in Europe, ii) improve and develop the education tools which will allow agroforestry training to be long-lasting, and iii) develop a unique agroforestry qualification program in each European country. It is coordinated by Charles Burriel and supported by Ghislaine Nouallet from AgroSup Dijon, France. Thirteen partners from 10 different countries contribute to the project with a wide range of knowledge, experiences and ideas. They all share the common will and wish to promote education in agroforestry, not only to disseminate this land use but also to allow the acquisition of new competencies and knowledge for those involved in

its practice. One of the goals of the AgrofMM project is to create and develop new innovative tools and resources on agroforestry such as a thesaurus specifically dedicated to agroforestry. So far, it has analysed existing educational systems and further seeks to explore more information such as to describe existing training procedures and identify needs, to census and evaluate existing educational tools, and to enrich the European book of professional reference for agroforestry farmers. Created in the framework of the preceding AgroFE project, the book of professional reference describes the tasks that the farmers and foresters who practice agroforestry must be able to achieve. It also supports the transfer of training. Other goals, based on the above findings, include the design of training systems, the production of educational material, including multimedia tools. It also seeks to practically validate the educational systems and analyze and disseminate the obtained results.

Materials and methods

The project aims to reach its goals by applying different types of training such as courses, group work, conferences, field visits and trainings, thematic workshops, and case studies. It is addressed to students, farmers, future farmers, foresters, workers, teachers, agricultural advisors and many other stakeholders.

Figure 1: Trainers trained in Greece, discussing with a stakeholder on his experience on agroforestry.

So far, it has accomplished many of its goals through the active participation of its members through transnational meetings, educators, students and farmers trainings (Figure 1) and field visits (Figure 2).

Figure 2: Stakeholders in a valonia oak silvopastoral system in Xeromero, Grece, during their training in the field.

An important asset of the field visits is the opportunity to interact with farmers, share and acquire their valuable experience. For example, during the field visit in Tornos, a remote mountainous village of Evritania, Greece, the farmer presented his multiple products including mushrooms (Figure 3).

Results

Several trainings have been organized so far by the partners. It is an on-going process and interesting results have been gathered so far. In Greece farmers expressed their concerns on

the future of the valonia oak silvopastoral system and their wish for an active involvement of the local authorities for the protection of the system. As mentioned before, a proportion of them did not identify agroforestry as a land use system even if most of them were practising it. Students of the TEI Stereas Elladas who attended a one-week intensive course, shared their enthusiasm on a future adoption of agroforestry. Agroforestry is already taught at the BSc level but many new issues, pursued by the project, will be incorporated to the original syllabus

Figure 3: Mushrooms is only one of the multiple products obtained by the mountainous agroforestry system in Tornos, Evrytania, Greece

In Albania a training week with the agronomy master students was organised. Agroforestry was a whole new concept for almost all participants. The training connected the EU and world experiences with the traditional agroforestry systems existing in the country. The students have gained knowledge and instruments to advance their studies and to start including agroforestry in their professional career. A textbook for the Agri University students has been adapted in Albanian, from well-known agroforestry academic sources. An informative training video, to reach the wide public and the farmers, has been produced and published on the social media. Another video with guidelines for farmers will be realized shortly. The training will continue with the extension/counselling service and farmers in the Korca Region, a territory that has tradition and high potential to increase the presence of agroforestry systems.

In Bulgaria, a course of agroforestry was created and included for the first time in the curriculum of the bachelor degree in Agronomy, Trakia University, Stara Zagora. Additional courses for post-graduate qualification for farmers, advisors and stakeholders were developed.

The University of Debrecen, Hungary, introduced Agroforestry in the agri-environment course at the BSc level. Within the Agrof-MM project 70 students enrolled and passed this course. 25 students are presently enrolled. During this course students learn about domestic and international practice and related research of farm forestry. They get to know the relationship between agricultural land use and forestry systems and learn the major technical details of the agroforestry implementations. The course also covers the agricultural soil protection and amelioration of the role that forestry plays. Students will learn about the natural breeding, pasture management, crop management and organic farming principles of joint realization of the forest during the training.

A lot of important work has been accomplished so far in France. In CFPPA Die, a one week training has been organized since 2010. A substantial number (150) of students have followed agroforestry training since the beginning. Additionally, there is an increase by 25 % of trainees each year, most of them having already installed a project in agroforestry. They are all very motivated on this subject and they come from all over France.

As mentioned before, the other major goal of the project, the *thesaurus,* contains about 150 words linked to agroforestry, from systems to ecosystems. These words are indexed in six main topics: agroforestry systems, agroforestry technics and practices, ecology and dynamics, ecosystem services, economy and law, and design and management. This work is nearly finished and will be published at the end of the project, in several languages and perhaps with a glossary.

The knowledge database has been developed to be used as a tool and training resource and will also integrate existing and future training resources (http://newkdb.agrofmm.eu). Collaborative and dissemination platforms were created and include an official web site

(http://agrofmm.eu/index.php/en/), Twitter (https://twitter.com/AgrofMM), a video-conference system and Facebook page have been registered and maintained (https://www.facebook.com/AgrofMMEU/), a mailing list and a Moodle training portal for project documentation (http://moodle.agrofmm.eu/), as well as a Learning Management System.

The Knowledge Databank (KDB) is a component of the project training system. It aims at gathering and sharing a set of documents, resources that partners can use and which learners and public users can access. The knowledge databank enables access to, sharing of and consultation of the resources for training. These resources are in different forms such as Mono document object (like a photo, a text, a diagram) and Composite materials (for example a html web page with images, a pdf file with pictures and diagrams, a video clip with images and sounds). The KDB is based on different professional vocabularies, metadata and thesaurus system (Figure 4) which is used for building the content structure and helping the users in their research.
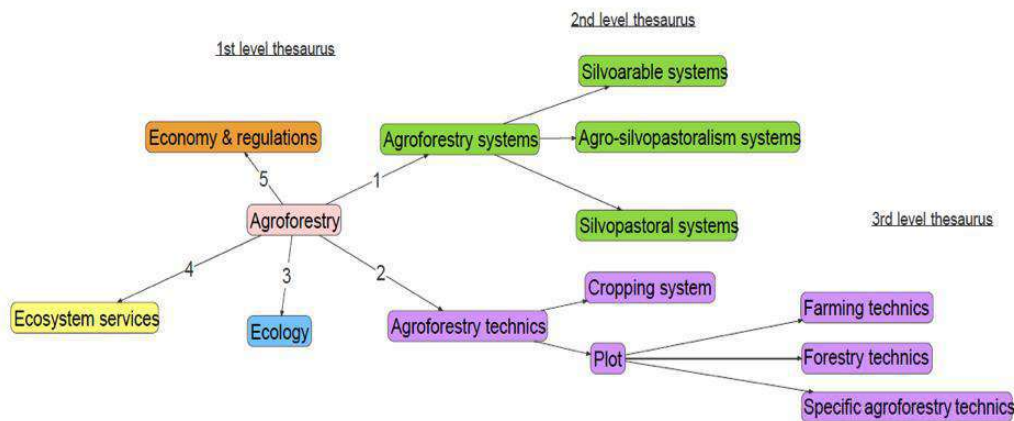

Figure 4. The levels of the thesaurus system for the Agrof-MM KDB (Developped by one of Agrof-MM working groups and composed by Jean-Michel Escurat)

Next steps

Trainings are continuously organised and more results are expected for the following months. An intensive course will be organised by the University of Debrecen in Hungary for students. All partners will organize a national event to present the results from their trainings and training method. Although the project is not over yet, the importance and contribution of education in the future adoption of agroforestry is quite clear. All these will be further evidenced within the next few months with the conclusion of this project.

Acknowledgment

References

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